

Unit Planning Guide: Grade 6 Unit 7 of 8

Unit Title: Geometry	Pacing (Duration of Unit): 5 weeks
Grade: 6	Buffer Day(s):

Transfer Goals

Students will be able to independently use their learning to:

- **Make sense of problems and persevere in solving them.**
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- **Model with mathematics.**
- Use appropriate tools strategically.
- Attend to precision.
- **Look for and make use of structure.**
- Look for and express regularity in repeated reasoning.

Established Goals (2011 MA Curriculum Frameworks Standards Incorporating the Common Core State Standards)

Standards (Priority Standards in bold):

- 6.SP.1 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. *For example, “How old am I?” is not a statistical question, but “How old are the students in my school?” is a statistical question because one anticipates variability in students’ ages.*
- 6.SP.2 Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.**
- 6.SP.3 Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.
- 6.SP.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.
MA.4.a. Read and interpret circle graphs.
- 6.SP.5 Summarize numerical data sets in relation to their context, such as by:**
- Reporting the number of observations.**
 - Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.**
 - Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.**
 - Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.**

WIDA for English Language Learners
Standard 1: ELLs **communicate** for **Social** and **Instructional** purposes within the school setting
Standard 3: ELLs **communicate** information, ideas and concepts necessary for academic success in the content area of **Mathematics**

In the lesson planning stage, teachers will need to differentiate lessons for ELLs. In order to accomplish this they will need: 1.) this curriculum map, 2.) a list of their ELLs and their proficiency levels, and 3.) appropriate language function expectations and scaffolds or supports.

Big Ideas:	Essential Questions:
<ul style="list-style-type: none"> Students as sensible, critical users of probability and statistics, able to apply their processes and principles to real-world problems. Understanding that data can be affected by the context in which it was gathered. Understanding probability and statistics is essential in the modern world, where print and electronic media are full of statistical information and interpretation 	<ul style="list-style-type: none"> How do people use data to influence others? How does data influence our decisions? How has the use of data changed throughout history? How does the use of data determine future decisions?

Acquisition (*Mostly assessed through traditional summative assessments)	
<p>Knowledge: Key basic concepts, facts, and key terms (written in phrases) students should be able to recall independently.</p> <p><i>Students will know ...</i></p> <ul style="list-style-type: none"> The difference between a statistical and non-statistical question That a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape That a set of data can be displayed numerically on a data plot, a histogram, or a box plot Data sets can be described by measures of center (median and mean) and variability (interquartile range and/or mean absolute deviation) 	<p>Skills: The discrete skills and process students should be able to use independently (<u>Bloom's Level of Learning should be noted in parentheses.</u>)</p> <p><i>Students will be skilled at:</i></p> <ul style="list-style-type: none"> Identifying a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. (comprehension) Demonstrating that a set of data collected to answer a statistical question has a distribution that can be described by its center, spread, and overall shape. (synthesis) Explaining that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number (evaluation) Summarizing and describing distributions (display numerical data in plots on number line, including dot plots, histograms, and box plots). (synthesis)

<p>Vocabulary:</p> <ul style="list-style-type: none"> • cluster • distribution • dot plot • frequency table • histogram • interval • standard deviation • statistical variability • median • mean • upper quartile • lower quartile 	<ul style="list-style-type: none"> • measure of center • outlier • range • relative frequency table • statistical question • statistics • box plot • histogram • interquartile • mean absolute deviation • upper extreme • lower extreme 	<p>Knowledge Questions:</p> <ul style="list-style-type: none"> • Why are there so many ways to describe data? • When is one data display better than another? • When is one statistical measure better than another? • What makes a good statistical question? • How do I determine whether a set of data is categorical or numerical? • How can I describe what is typical about a set of data? • How can I describe how much the data varies?
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